

WATER PARTICLE MANIPULATION

ABSTRACT OF THE DISCLOSURE

Realistic sprays for simulated fluids are created by adding a set of spray particles to a boundary region just below the fluid surface. The fluid surface is determined by solving a level set equation for a zero level corresponding to the fluid surface. Additionally, the boundary region is determined by solving the level set equation for a non-zero level corresponding to a surface at the specified depth from the fluid surface. The set of spray particles inherit an initial state, for example a velocity, from the fluid simulation. Subsequent motion of the spray particles is determined according to a ballistic simulation, rather than a fluid simulation, thereby substantially reducing the computational burden required to animate the fluid. Spray particles that sink below a specified depth from the fluid surface are removed.

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